



In the United States Patent and Trademark Office

Appellants:	Richard Norris Dodge II Sridhar Ranganathan Roland Columbus Smith, Jr.	Docket No.:	16184
Serial No.:	10/022,329	Group:	3761
Filed:	December 14, 2001	Examiner:	Michele M. Kidwell
For:	High Capacity and High Rate Absorbent Composite	Date:	July 23, 2004

Appeal Brief Transmittal Letter

Mail Stop Appeal Brief - Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. 1.192, transmitted herewith in triplicate is an Appeal Brief pursuant to the Notice of Appeal which was mailed on May 27, 2004.

Please charge the \$330.00 fee, pursuant to 37 C.F.R. 1.17(c), which is due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. This Appeal Brief Transmittal Letter is submitted in duplicate.

Respectfully submitted,

DODGE ET AL.

By: 

Nathan P. Hendon

Registration No.: 55,848

CERTIFICATE OF MAILING

I, Nathan Hendon, hereby certify that on July 23, 2004 this document is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By: 

Nathan Hendon



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Brief on Appeal to the Board of Patent Appeals and Interferences

Mail Stop Appeal Brief - Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. 1.192 Appellants respectfully submit this Brief in support of their Appeal of Examiner Kidwell's **Final Rejection** of claims 1 - 22 which was mailed on January 28, 2004.

On May 27, 2004, Appellants, pursuant to 37 C.F.R. 1.191 mailed a timely Notice of Appeal. Thus, the time period for filing this Brief ends on July 27, 2004.

In accordance with 37 C.F.R. 1.192(a) this Appeal Brief is filed in triplicate.

REAL PARTY IN INTEREST

The present Application has been assigned to the Kimberly-Clark Worldwide, Inc.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the Appellants, the Appellants' legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1 – 22 remain pending in the application with claims 1 – 22 being finally rejected. No Claims have been withdrawn or cancelled. Claims 1 – 22 are on appeal.

STATUS OF AMENDMENTS

An Amendment After Final was submitted on April 9, 2004. By way of an Advisory Action mailed April 30, 2004, the Examiner considered the request for reconsideration but did not find the application to be in condition for allowance and did not enter the proposed amendments.

SUMMARY OF THE INVENTION

The Appellants have invented a nonwoven material for personal care products in the form of a web of Z-directionally oriented fibers. Such fibers are oriented in a direction perpendicular to the predominant plane (X-Y) of the fabric (page 5, lines 9 – 15). The inventors have found that such Z-directional orientation of the fibers in the web is important to provide a high intake rate (page 11, lines 13 – 18).

The web contains a large percentage of superabsorbent fibers: at least 40 weight percent, and more particularly more than 50 percent and still more particularly more than 60 percent. The balance of the fibers may be synthetic or natural fibers. Synthetic fibers include polymeric fibers like polyolefins, polyamides, polyesters, polyethers, polyethylene terephthalate and combinations thereof in bicomponent form.

A binder is used in an effective amount to maintain the integrity of the web. The binder is preferably a bicomponent fiber and should be present in an amount of between 10 and 60 weight percent, more particularly about 20 to 50 weight percent and most preferably about 30 percent by weight. Polyethylene/ polypropylene side-by-side or sheath/core bicomponent fibers are particularly well suited for this purpose. Binders in powder and liquid forms may also be used in this invention.

In one embodiment natural fibers or synthetic fibers that are hydrophilic may also be added to the web in order to control the wettability of the web. Pulp, cotton, and rayon are suitable for this purpose and may be present in an amount between 0 and 40 weight percent, more particularly about 20 to 30 percent.

In another embodiment synthetic fibers such as PET may be added to improve the resiliency of the web to provide enhanced intake function. They may be in the range of 10 to 40 weight percent,

more particularly 20 to 30 percent, if desired.

The nonwoven material of this invention should have an intake rate at 50 percent saturation of at least 7 cc/s and a capacity of at least 4 g/g, more particularly an intake rate of at least 8 cc/s and a capacity of at least 6 g/g, and still more particularly an intake rate of at least 8 cc/s and a capacity of at least 10 g/g.

These materials are suitable for use in personal care products like diapers, training pants, incontinence products, bandages, and sanitary napkins.

ISSUES

The Issues for review are:

- (A) Are claims 1 – 18 properly rejected under 35 U.S.C. § 102(b) as being anticipated by Wanek et al. ?**
- (B) Is claim 19 properly rejected under 35 U.S.C. § 102(b) as being anticipated by Kellenberger?**
- (C) Are claims 20 - 21 properly rejected as unpatentable under 35 U.S.C. § 103(a) over Kellenberger?**
- (D) Is claim 22 properly rejected as unpatentable under 35 U.S.C. § 103(a) over Wanek et al. in view of Kellenberger?**

GROUPING OF CLAIMS

The claims stand or fall together with regard to the particular issues upon which they have rejected.

ARGUMENT

Issue A: 102(b) rejection based on Wanek et al.

By way of the Office Action mailed January 28, 2004, Examiner Kidwell rejected claims 1 – 18 under 35 U.S.C. § 102(b) as allegedly being anticipated by Wanek et al. (U.S. Patent No. 5,466,513). For a prior art reference to anticipate in terms of 35 U.S.C. § 102(b), every element of the claimed invention must be identically shown in a single reference. Atlas Powder v. E.I. du Pont, 224 USPQ 409 (Fed. Cir. 1984).

Wanek et al. discloses a multi-layer absorbent composite of high-absorbency material and synthetic polymeric fibers that can be used in a personal care product. However, Wanek et al. does not disclose or teach the Z-direction orientation of fibers as in the present invention. Wanek et al. discloses that superabsorbent particles in an absorbent layer may be present with a Z-gradient particle size distribution. Such a distribution gradient of particle size is described as larger particles of superabsorbent being present on the bodyside of the absorbent layer while smaller superabsorbent particles being present on the opposite side of the same absorbent layer (column 11, lines 5 – 30).

In contrast, **the fibers** of the present invention are oriented in the Z-direction. When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning. In re Zletz, 893 F.2d 319, 321, 12 USPQ2d 1320, 1322 (Fed. Cir. 1989). As defined in the present invention (page 5, lines 9 – 15), such an Z-direction orientation refers to the fibers of the nonwoven web, including the absorbent fibers, being oriented in a direction perpendicular to the predominant plane (X-Y) of the fabric. This orientation of fibers is important in order to provide a high intake rate (page 11, lines 13 -14).

Therefore, Wanek et al. fails to disclose each and every element of the Applicants' claims. Applicants respectfully submit that the rejection of claims 1 – 18 under 35 U.S.C. § 102(b) in view of Wanek et al. is untenable. Thus, claims 1 – 18 were not properly rejected under 35 U.S.C. § 102(b) as being anticipated by Wanek et al.

Issue B: 102(b) rejection based on Kellenberger

By way of the Office Action mailed January 28, 2004, Examiner Kidwell rejected claim 19 under 35 U.S.C. § 102(b) as allegedly being anticipated by Kellenberger (U.S. Patent No. 5,147,343).

Kellenberger discloses an absorbent structure that can be used in a personal care product. Example 1 of Kellenberger also refers to superabsorbent material disposed in a Z-direction gradient (column 11, lines 61 – 66). Such an absorbent is disclosed as made according to the teachings of U.S. Patent No. 4,699,823 to Kellenberger et al., which is incorporated by reference (column 11, lines 61 – 66). Kellenberger et al. '823 discloses that such a Z-direction gradient of superabsorbent is a concentration gradient of superabsorbent material (see column 3, lines 5 – 11 and column 5, lines 16 – 24) where the concentration of superabsorbent material changes as one proceeds through the thickness of the absorbent material from the bodyside to the opposite side of the absorbent material (column 5, line 38 to column 6, line 16).

In contrast, as discussed above, the **fibers** of the present invention are oriented in the Z-direction. As defined in the present invention (page 5, lines 9 – 15), such an orientation refers to the fibers of the nonwoven web, including the absorbent fibers, being oriented in a direction perpendicular

to the predominant plane (X-Y) of the fabric. This orientation of fibers is important in order to provide a high intake rate (page 11, lines 13 -14).

Additionally, Examiner Kidwell contends that Kellenberger discloses an absorbent having an intake rate at 50% saturation of at least 7 cc/s and a capacity of at least 4 g/g as set forth in column 11, lines 14 – 34. The values that the Examiner refers to are the values associated with the Vertical-Fluid Intake and Flowback Evaluation (V-FIFE) and Multiple Insult Demand Absorbency Test (MIDAT) testing methodologies. Such values of fluid delivered as part of the V-FIFE and MIDAT testing procedures do not inherently imply the intake rate and capacity of the present invention.

Therefore, Kellenberger fails to disclose each and every element of the Applicants' claim. Applicants respectfully submit that the rejection of claim 19 under 35 U.S.C. § 102(b) in view of Kellenberger et al. is untenable. Thus, claim 19 was not properly rejected under 35 U.S.C. § 102(b) as being anticipated by Kellenberger.

Issue C: 103(a) rejection by Kellenberger

By way of the Office Action mailed January 28, 2004, Examiner Kidwell rejected claims 20 - 21 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Kellenberger (U.S. Patent No. 5,147,343) .

Kellenberger, as discussed above with regard to Issue B, does not disclose absorbent fibers orientated in the Z-direction. Additionally, as discussed above, Kellenberger does not disclose the intake rate and capacity of the present invention.

Claims 20 – 21 are dependent claims and contain all the limitations of claim 19. For the reasons previously discussed, Kellenberger does not teach the present invention. Applicants respectfully submit that a *prima facie* case of obviousness under 35 U.S.C. § 103(a) has not been established, and the rejection of claims 20 -21 is untenable. Thus, claims 20 - 21 were not properly rejected as unpatentable under 35 U.S.C. § 103(a) over Kellenberger.

Issue D: 103(a) based on Wanek et al. in view of Kellenberger

By way of the Office Action mailed January 28, 2004, Examiner Kidwell rejected claim 22 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Wanek et al. (U.S. Patent 5,466,513) and further in view of Kellenberger (U.S. Patent No. 5,147,343) .

As discussed above in the discussion of claims 1 – 21, both Wanek et al. and Kellenberger disclose absorbent material having a Z-direction distribution gradient. As such, neither reference teaches the absorbent fiber Z-direction orientation of the present invention in the sense of 35 U.S.C. § 103(a). Furthermore, as discussed above for claims 19 -21, neither reference teaches the intake rate and capacity of the present invention.

Therefore, as neither reference independently nor in combination teaches the present invention, a *prima facie* case of obviousness under 35 U.S.C. § 103(a) has not been established and the rejection of claim 22 is untenable. Thus, claim 22 was not properly rejected as unpatentable under 35 U.S.C. § 103(a) over Wanek et al. in view of Kellenberger.

Appendix

The claims on appeal are:

- 1) A nonwoven material for personal care products comprising superabsorbent fibers in an amount of at least 40 weight percent and binder in an amount of between 10 and 60 weight percent, in a Z-directionally oriented web.
- 2) The nonwoven of claim 1 further wherein said binder is synthetic bicomponent fibers.
- 3) The nonwoven of claim 2 further comprising natural fibers in an amount of at most 40 weight percent.
- 4) The nonwoven of claim 3 further comprising synthetic polymeric fibers selected from the group consisting of polyolefins, polyamides, polyesters, polyethers, polyethylene terephthalate and combinations thereof.
- 5) A diaper comprising the material of claim 3.
- 6) A training pant comprising the material of claim 3.
- 7) An incontinence product comprising the material of claim 3.
- 8) A bandage comprising the material of claim 3.
- 9) A sanitary napkin comprising the material of claim 3.
- 10) A nonwoven material for personal care products comprising superabsorbent fibers in an amount of at least 50 weight percent, polypropylene/polyethylene bicomponent fiber in amount of at least 20 weight percent, in a Z-directionally oriented web.
- 11) The nonwoven of claim 10 further comprising natural fibers wherein said natural fibers are hydrophilic.
- 12) The nonwoven of claim 11 wherein said natural fiber is selected from the group consisting of cotton, pulp and rayon.

- 13) A diaper comprising the material of claim 12.
 - 14) A training pant comprising the material of claim 12.
 - 15) An incontinence product comprising the material of claim 12.
 - 16) A bandage comprising the material of claim 12.
 - 17) A sanitary napkin comprising the material of claim 12.
 - 18) A nonwoven material for personal care products comprising superabsorbent fibers in an amount of at least 60 weight percent, polypropylene/polyethylene bicomponent fiber in amount of about 30 weight percent, and rayon fibers, in a Z-directionally oriented web.
 - 19) A nonwoven material for personal care products comprising a Z-directionally oriented web having an intake rate at 50 percent saturation of at least 7 cc/s and a capacity of at least 4 g/g.
 - 20) The nonwoven material according to claim 19 having an intake rate at 50 percent saturation of at least 8 cc/s and a capacity of at least 6 g/g.
 - 21) The nonwoven material according to claim 19 having an intake rate at 50 percent saturation of at least 8 cc/s and a capacity of at least 10 g/g.
 - 22) A nonwoven material for personal care products comprising superabsorbent fibers in an amount of at least 50 weight percent, polypropylene/polyethylene bicomponent fiber in amount of at least 20 weight percent, in a Z-directionally oriented web, wherein said web has an intake rate at 50 percent saturation of at least 7 cc/s and a capacity of at least 4 g/g.
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Conclusion

For the reasons stated above it is Appellants' position that the Examiner's rejection of claims 1 - 22 has been shown to be untenable and should be **reversed** by the Board.

Please charge the \$330.00 fee, pursuant to 37 C.F.R. 1.17(c), for filing this Appeal Brief to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. Any additional prosecutorial fees which are due may also be charged to deposit account number 11-0875.

The undersigned may be reached at: (770) 587-8640.

Respectfully submitted,

DODGE ET AL.

By: 

Nathan P. Hendon

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CERTIFICATE OF MAILING

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